REMARKS

Claims 1-11, 14, 15, 17-19 have been previously canceled; claims 16 and 28 are currently canceled. Claims 12, 29 and 30 have been amended by way of this response. No new claims have been added. Thus, claims 12, 13, 20-27, 29 and 30 are currently pending and presented for examination. Applicant respectfully requests reconsideration and allowance of the pending claims in view of the amendments and the remarks.

Applicant respectfully submits an amended set of claims. Applicant has amended independent claims 12 and 29 such that the embossings are formed as circular depressions, and wherein the embossings are offset relative to one another. Support for these amendments may be found for example in paragraph [0008] and FIG 3, FIG 5 and FIG 6 of the specification and claims 14-16 as filed with the Preliminary Amendment. No new matter has been added.

Independent claims 12 and 29 now recite:

Independent claim 12

> "...the separator is formed from two plates each having ~~rib-shaped~~an embossing and touching at contact surfaces, ~~wherein the rib-shaped embossing on each plate includes a plurality of straight and parallel ribs and the plates are rotated relative to one another so that the ribs on one plate has an axis of symmetry that is offset relative to an axis of symmetry on the other plate~~, wherein the embossings are formed as circular depressions, and wherein the embossings of the plates are offset relative to one another; ..."

Independent claim 29

> "A heating device of a fuel cell, having
> a flow directing element disposed between opposite edge plates, wherein the flow directing element is formed as a heating element from two plates each having an embossing, wherein the embossings are formed as circular depressions, and wherein the embossings of the plates are offset relative to one another; and
> a flow chamber being formed between the heating element and an edge plate in each case and another flow chamber being formed between the

plates, the last mentioned flow chamber having subchambers, each subchamber facing a plate and comprising an overflow section configured to provide a flow path solely on an alternating basis~~, wherein the embossing is rib-shaped including straight and parallel ribs and on one plate has an axis of symmetry that is offset relative to an axis of symmetry on the other plate~~."

Applicant's separator 1 is formed from assembled plates 3 and 4. As shown in FIG 1-3, each plate 3, 4 has an embossing 5 in the form of a dimpled pattern (circular depressions), the embossing direction P of the bottom plate 4 in FIG 2 being opposite to the embossing direction of the upper plate 3. The separator 1 disposed between adjacent electrolyte-electrode units 2 delimits three fluid chambers 7, 8, 9, namely a gas chamber 7, 8 bordering an electrolyte-electrode unit 2 in each case as well as a coolant chamber 9 disposed between the plates 3, 4 for a fluid coolant. The coolant chamber 9 is divided into two subchambers 10, 11 bordering one another on the central plane M and which are formed from a plurality of dimple-shaped depressions 12. When coolant flows from a depression 12 of a plate 3, 4 into the opposite plate 4, 3, the coolant is automatically directed from one subchamber 10, 11 to the opposite subchamber 11, 10. The coolant therefore continuously undergoes a change of direction perpendicular to the separator 1. In addition, the coolant is also continuously diverted in directions parallel to the center plane M by the offset arrangement of the depressions 12. *As can be seen from FIG 2, the embossings 5 of each plate 3, 4 do not touch each other as they are offset relative to one another.*

Even if coolant is introduced into the separator 1 at one location only, it is distributed widthwise within a short distance. Flow takes place with a uniform flow resistance within the surface of the separator 1. *There is no need for any distributor elements or spacers between the plates 3, 4 or between adjacent electrolyte-electrode units 2.*

The abovementioned advantages of the separator 1 likewise apply when it is used as a heating element or heating register in a heating device of a humidifier for the fuel cell (independent claim 29). All the Figures also show the structure of a heating element 1'.

Mattejat et al. describes a component for installation in a process control apparatus which can be inserted into a fuel cell block. The component includes two plates disposed parallel to one another. In the first non-final office action mailed July 29, 2008, the examiner stated that

Mattejat et al. would disclose embossings which are formed as essentially circular depressions (Mattejat et al., col. 5, lines 52-57, and col. 7, lines 41-48). Applicant respectfully disagrees. Mattejat et al. shows in FIG 3 openings 46-52 provided in the plates 40, 42, the openings forming parts of axial channels 54-60. Each of the axial channels 54-60 is adjoined by two channels 62-68, extending in the plane of the plates. *The channels 62-68 are created by joining together the plates 40, 42 which have half-round groove-like indentations impressed into them in coincident fashion* (Mattejat et al., col. 5, lines 52-57). In contrast, Applicant's embossings are circular depressions (dimpled pattern) instead of half-round groove-like indentations forming channels.

Furthermore, Mattejat et al. discloses in col. 7, lines 41-48, hemispherical protuberances or half-round groove-like protuberances or frustoconical protuberances in the plates 40, 42, having structures which are staggered with respect to one another, in order to space the plates apart. As can be seen in FIG 4-6, these *protuberances touch each other in order to space the plates apart.* For example, as described in col. 7, lines 60-65, a truncated cone of the plate 40 is disposed concentrically with the equilateral triangle that is formed of three truncated cones of the plate 42 and a the same time rests on the three truncated cones. As the protuberances touch each other, *a coolant cannot flow alternately through the subchambers of the two plates.* In contrast, Applicant's circular depressions do not touch each other such that coolant is automatically directed from one subchamber of the one plate to the opposite subchamber of the other plate.

Suzuki et al. or Mizuno do also not show a separator formed from two plates, each plate having an embossing formed as circular depressions. Suzuki et al. discloses a first and second separator having hollow spaces for passing therethrough a gas and a plurality of elongate hollow ridges with troughs interposed therebetween, the hollow ridges creating a gas flow path (see Suzuki et al, claim 1 and abstract for example). Mizuno describes a fuel cell including a separator on which a gas passage groove is formed. A cross sectional area of a gas passage changes in a direction in which the gas passage groove extends, while each of an opening width of the gas passage groove and a depth of the gas passage groove remains substantially constant (see Mizuno, claim 1 and abstract for example).

In view of the above, independent claims 12 and 29 are patentable. Furthermore, dependent claims 13 and 20-27, which depend on claim 12, and dependent claim 30, which depends on claim 29, are also patentable at least based on their dependence from claim 12 or 29 as well as based on their own merits. Therefore, Applicant respectfully requests the Examiner to withdraw the rejections.

Conclusion

Please grant any extensions of time required to enter this paper. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including fees for additional claims and terminal disclaimer fee, or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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